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TO:

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Examiner Vinh Luong U.S. Patent & Trademark Office	1.571.273.7109	

FROM: Julianne Smith **PHONE:** 414.271.6560

SENT BY: Kerry **EXTENSION:** 15354 **LOCATION:** 30NE

RE: U.S. Patent Application No. 10/588,841
"CRANKSHAFT ARRANGEMENT AND STRUCTURAL PART FOR SAID CRANKSHAFT ARRANGEMENT"

NUMBER OF PAGES, INCLUDING COVER: 5		
CLIENT-MATTER NUMBER:	022862-1090	SENDER'S ACCOUNT NUMBER 1060

NOTES/COMMENTS:

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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
Art Unit 3656

Application No. 10/588,841

First Named Inventor/Applicant: Detlef Lauk

Title: CRANKSHAFT ARRANGEMENT AND STRUCTURAL PART FOR SAID CRANKSHAFT ARRANGEMENT

Mail Stop - After Final
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

REQUEST FOR RECONSIDERATION

Sir:

In response to the Office action of December 27, 2010, please amend the above-identified application as follows.

Please charge or credit Deposit Account No. 13-3080 with any shortage or overpayment of fees required for this Amendment, including for extensions of the time for response.

Remarks/Arguments begin on page 2 of this paper.

REMARKS/ARGUMENTS

No claims are hereby amended.

According to the teachings of Merkel et al. the crank is not and **cannot be** pressed onto the layer (44) for the following reasons:

During the assembling process the layer is provided by assembly casting. During the assembly casting a material engagement/adhesive bond is provided between the layer 44 and the crank 12 as well as with the shaft 14 (column 3, lines 38 to 43). The structure of the layer is thus defined by the contour of the bore hole of the crank 12 and a casting-form surrounding the connection area. In order to be able to create the layer 44 the shaft has to be inserted into the bore hole of the crank. Then the assembly casting takes place, thereby connecting the shaft with the crank. This, however, leads to the fact that first the shaft 14 and the crank 12 are arranged to one another in the final position, then the layer 44 is cast. Merkel et al. therefore discloses an absolutely different approach for connecting the shaft and the crank.

The crank 12 of Merkel et al. cannot be pushed onto the layer 44 since the layer is not available before it is cast. At the time the layer is cast, the crank 12 cannot be pressed onto the layer anymore. Even if the crank could be pressed onto the layer 44 additionally after the layer has been cast, as presented by the Examiner, this would not be obviously for a person of ordinary skill in the art since the layer is there to provide an adhesive bond/material engagement. This adhesive bond would be destroyed by a later pressing procedure, hence the crank could not be pressed onto the layer.

In the Office Action, the Examiner still refers to the layer 44 as a structural element onto which something can be pressed. This is – as discussed above – not the case. And even if only the sketch of figure 1 would be known to the person of ordinary skill in the art, without the knowledge about the axial assembling process as described in the specification of the present application, the person of ordinary skill in the art would have no reason to think that the crank 12 can be pressed onto the layer 44 to connect the crank with the shaft for the following further reasons: The layer 44 as shown in the cross sectional view of figure, 1, comprises a U-shaped

lateral surface defining the first fore part, the second fore part and the middle part as labeled in the drawings by the Examiner

In this respect please note that the first fore part as labeled by the Examiner does not project into the bore hole of the crank instead the first fore part is arranged next to the bore hole and does not project into the bore hole. The Examiner argues that the crank could be fitted or slided along the shaft 14 so that the crank 12 can pass the first fore part and slide onto the middle part between the first and second fore parts as seen in figure 1. However, this argument is flawed because the middle part has a significantly smaller diameter than both fore parts.

If the crank could pass the first fore part, then it would also pass the middle part and the second fore part. There is no explanation or hint for why the crank could be pressed onto the layer on the middle part which has a smaller diameter than the fore parts. The U-shape of the lateral surface of the layer 44 with the middle part which is in touching contact with the inner side of the crank 12 as disclosed in figure 1 defines a positive locking for the crank in both axial directions that hinders the crank 12 to be moved in the axial direction from the layer. This is what would be obvious for a person or ordinary skill in the art and would lead to the fact that if the crank cannot be slid from the layer 44 due to the positive locking, it can also not be slid onto the layer 44 and in particular not pressed onto the middle part of the layer 44. Pressing the crank onto the layer 44 or the layer 44 into the bore hole of the crank would lead to the destruction of the layer or the crank since the outer diameter of the first fore part of the layer is obviously significantly larger than the inner diameter of the bore hole of the crank.

Therefore, the crank could not be pressed onto the layer if the layer was a structural part as required by claim 1 of the present application. Only if the inner diameter of the bore hole was larger than the outer diameter of the first fore part, the crank could be pushed onto the layer 44, as described by the Examiner. This, however, is neither disclosed nor suggested by D1. Since it is neither disclosed nor suggested, D1 neither shows nor suggests an arrangement where the crank can be pressed onto the structural part. This is a result of impermissible hindsight.

Therefore, Merkel et al. does not only not teach that the crank is pressed onto the layer, but also that the crank cannot be pressed onto the layer without destroying it due to the design, and in particular due to the disclosed assembling process or the material engagement. This

invention clearly differs from Merkel et al. where the crank is not and cannot be pressed onto the structural part of the axial direction.

Furthermore, the Examiner argues that figures 2 and 3 of Hawighorst et al. show a connection between the crank and the shaft. However, Hawighorst et al. provides no additional structural element to provide a connection between the crank and the shaft. According to Hawighorst et al. the crank 24 is directly mounted onto the shaft without any intermediate element. Since the shaft is directly arranged on the shaft, a structural element between the crank and the shaft that prohibits the shaft from being axially stressed cannot be suggested by Hawighorst et al. Rather, only through impermissible hindsight do Merkel et al. and Hawighorst et al. meet the claim limitations.

Therefore, we believe the claims are patentably distinct from Merkel et al. and Hawighorst et al., taken alone or in combination.

Reconsideration of the rejection and allowance of the claims are respectfully requested.

Respectfully submitted,

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